

REMARKS

## 1. Regarding the matters discussed in paragraph 1A of the Office

## Action:

- a. Applicant believes that the wording in the specification relating to elements 4, 6 and 12 is correct; however, their location and depiction in Figs. 1, 4 and 5 was somewhat confusing. Reference numeral 4 refers to the carriage(s) in general, so the reference numeral 4 is now moved to a somewhat remote position, with an arrowhead pointing generally at the carriage(s). Support structure 6 is now shown with an arrowhead directed generally at those elements that are described later as comprising the structure. Reference numeral 12 depicts the front connecting forks and, now that the other two reference numerals have been clarified, clearly identifies that element.
  
- b. Applicant has amended the portion of the specification that describes the drawings (Paragraph [0014]) and Figure 2, so it should be sufficiently clear to the Examiner what portion of the invention is being depicted. Figure 2 has been amended to show the cylindrical intermediate portion of pin 30, in the upper and lower positions, in dotted line format. This should clear up the question raised by the Examiner on the depiction of this element. Applicant does not understand the statement in the Office Action that "...the invention does not appear to have the capability of assuming these positions..." Paragraph [0025] clearly points out that when the carriage(s) move up and down in response to rough terrain; more specifically it states that the "position of the carriages 4 with respect to the frame 2 adapts automatically in dependence of the roughness of the terrain...". Even more particularly, it can be seen that rough terrain causes the tracks 7 and carriages 4 to move up and down in a generally vertical plane, and thus

movement of the fork 12. When fork 12 moves, so does arm 22, between upper and lower positions dependent upon the roughness of the terrain.

- c. Subparagraph 1A(c) of the Office Action states that Figure 3 is completely unclear in that axis 10 does not agree with that of Figure 1, and it is unclear why there appears to be more than one pin assembly in the carriage in the transverse direction. The front portion of carriage 4 is pivoted about the rear axis 10 in response to terrain. Because the pin 30 is continuously directed toward the pivot axis 10, the pin 30 must also pivot as the carriage moves upwardly and downwardly with respect to the frame 2. This is accomplished mainly by the spherical joint 44. These relationships and interactions are described clearly in paragraphs [0020] and [0022] through [00225]. Figures 1 and 3 definitely do not depict conflicting structures.
- d. The description of Figure 6 in Paragraph [0017] has been amended to plainly state that Figure 6 depicts a variation to the connecting assembly 25 of the crawler shown in Figure 1. This should clear up the Examiner's confusion regarding Figure 6.
- e. Contrary to the statement in the Office Action that "none of the figures depict the 'first connecting device' permitting oscillation about axis 10" as recited in claim 1, this structure is unmistakably shown in at least Figures 1 – 5. In significant part, this structure is the same discussed above in paragraph 1A(c) regarding oscillation about axis 10. While the terms "first connecting device" are broader, these terms more narrowly include the pin 30, the arms 13, 14, the cylindrical seats 15, 16—in other words, the connecting assembly 25.

f. The Office Action states further that the structure of the inner ring 47 cannot be discerned in the figures. Applicant does not agree. Inner ring 47 is part of the spherical joint 44. Figures 4 and 5 show, and Paragraph [0024] describes the inner ring as being connected to portion 38 of pin 30 and fitting into spherical seat 46 of outer ring 45 to allow the pin 30 to slide axially in opposite directions (as shown in Figure 3). It is further described as including a spherical head 48 engaging seat 46. Additional clarifying description is made in Paragraph [0031].

More specifically, the inner ring 47 is shown to be a fairly simple element. It comprises a ring (circular) that fits on portion 38 of pin 30. The outer surface is convex (see Figures 4 and 5) forming a spherical head 48 that generally mates with the concave spherical seat 46 of outer ring 45. Applicant submits that the structure of the inner ring is clear and unequivocal.

The lead lines for element 47 have been changed to address the Examiner's confusion regarding exactly what element or feature reference numeral 47 is meant to identify. Reference numeral 47 is the inner ring generally.

g. The Office Action states further that the outer ring 45 cannot be discerned in the figures, and that in Figure 5 the element labeled "45" appears to depict two different features, neither of which appear to be an "outer ring". Applicant disagrees.

Once again referring to Paragraphs [0024] and [0031], and Figures 4 and 5, it is clear that the outer ring 45 matches the contour of inner ring 47 and mates therewith to form an articulated or spherical joint 44. The surfaces of the two rings operate in general contact with each other to provide relative movement in two

dimensions (thus, the term "articulated" is appropriate). Applicant believes that the configuration of the outer ring is as clear and precise as possible, and certainly as clear as is required to understand the operation of the invention. The only other possible way that Applicant can think of to make the configuration clearer would be to have a separate figure for the outer ring by itself, but that would be merely duplicative of the teachings of the existing figures.

- h. The "slide" and "guide" recited in claim 7 was indicated as missing from the figures. In fact, these elements are shown in the drawings, but these exact words are not used in the specification (not a necessity if fully described and understood). In the most simple and clear form, the "slide" and "guide" are discussed in paragraphs [0024] and [0028], and shown in Figs. 2 and 6. A review of these paragraphs and figures will clarify the issue.

Paragraph 1A of the Office Action concludes with the statement that the issues described in this paragraph result in an invention that is nearly incomprehensible with respect to the drawings. Applicant does not disagree that there were some mistakes in the drawings, it is not agreed that they render the invention incomprehensible, or even nearly so. The invention is, in fact, clearly shown in the drawings and described in the specification, together making a full and complete disclosure. The corrections made herein and the comments made in response to the Office Action fully respond to any issues raised.

2. Paragraph 1B of the Office Action objects to the specification in that:

- The statement "articulated the joints 44" is unclear (page 7, line 1);

- The statement "vary the length of the cross member 18" and references to "length" are unclear "because this feature simply does not appear viable given the structure of the invention" (page 7, lines 3 and 4, and paragraph [0026]); and
- The "sliding connection of the inner ring 47" cannot be identified in the figures (pages 7, paragraph [0027]).

The phrase "articulated the joints 44" contained an obvious typographical error, and has been corrected herein to "articulated joints 44".

The reference "vary the length of cross member 18" is not exactly correct inasmuch as cross member 18 is of a fixed length. This language was used to simplify the description—it being reasonably clear and requiring a more basic explanation. To be more precise, it is the radius defined by L1 and L2. Note paragraph [0023] through [0026] (and Figs 2-5) which describe the offset relationship between the axes 17 and 40 that provide the eccentricity that allow L1 and L2 to be different. These features and elements of the invention are thus clearly described in the specification.

The "sliding" connection discussed in paragraph [0027] is described in further detail in paragraph [0024] and appears clear to Applicant—inner ring 47 is connected to the portion 38, which is able to slide axially in opposite directions (see Fig. 3).

3. Paragraph 1C of the Office Action relates to the claims and points out several matters that will be separately addressed:

- In claim 1, the "first connecting device is unclear because it is unknown how it permits oscillation of the carriage and frame with respect to the axis 10.

Applicant is at somewhat of a loss as to how to respond to this objection. The specification and drawings both clearly cover the questioned structure. Attention is directed to Fig. 1 and paragraph [0019].

- In the last two lines of claim 1 "for varying the length of said cross member" is unclear and it is not possible to "vary the length of a structural member.

The discussion above in paragraph 2 is directed toward this subject matter, and provides clarification adequate to meet all requirements.

- In claim 7, the "slide" and "guide" cannot be discerned in the spec or drawings.  
Paragraph 1A(h) above responds adequately to this issue.
- Claim 11 is unclear.

Claim 11 is amended herein in an effort to make the wording clearer to the Examiner; however, Applicant believes that the original language is quite clear and expresses the ideas that Applicant feels are necessary to a proper and adequate claim.

- In claim 13, "difference" lacks antecedent basis.

Claim 13 is amended herein to more clearly describe the difference originally intended in this claim.

- In claim 14, "three orthogonal planes" is unclear because neither the spec nor drawings support these elements.

Claim 14 has been amended by dropping the word "orthogonal". The three planes are, in fact, orthogonal, but Applicant has removed the word—the three planes are clearly set out in the drawings and specification.

4. Enclosed herewith is a certified copy of the priority patent cited in the Declaration.

5. In summary, claims 11, 13 and 14 have been amended, and claims 1-14 remain in the application. Applicant believes that the claims as herein presented are allowable, and respectfully requests that all objections be withdrawn and that the application be sent to Allowance.

Pursuant to currently recommended Patent Office practice, the Examiner is expressly authorized to call Applicant's attorney, collect, at New Holland, Pennsylvania, if in her judgment disposition of this application could be expedited or if she considers the application ready for final disposition by other than allowance.

Respectfully submitted,

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